THE
AGRICULTURAL MAGAZINE.

CAMDEN, NEW JERSEY, JULY 17th, 1826.

The prospects of crops throughout the country has changed wonderfully since the late rains; oats have improved beyond all expectation, insomuch that the crops of that grain it is now anticipated, will be equal if not superior to those of the last year, in consequence of which, they have fallen from 70, to 55 or 60 cents per bushel. The late crops of grass bid fair to make amends for the shortness of the first, and the crops of corn, generally, were scarcely ever more promising; in short, all the later crops promise well, and notwithstanding the gloomy aspect of the early part of the season, and the partial injury sustained in some instances in gathering the harvest, from a series of cloudy and damp weather, and in others by unusual freshets, yet upon the whole, we think the present appearances of the productiveness of the season are truly flattering, and call for responsive feelings of gratitude to the author of such rich, and but a few weeks since, almost unlooked for blessings.

Wheat, is quoted in the Philadelphia Price Current, at from 87½ to 95 cents per bushel; Rye at 75 to 80, and Corn from 74 to 80.

TURNIPS.

There are two species of the Turnip, the common flat Turnip or *brassica rapa*, of which there are several varieties; and the *brassica, coulorapa*, or the Ruta Baga, also called the cabbage Turnip, and sometimes the sweedish Turnip. The same mode of cultivation has generally been practiced untill within a few years, by the Farmers in this country, in the cultivation of the Flat Turnip and Ruta Baga, to wit; by sowing the seeds broad cast, on new land or on old sod that has been folded, properly prepared by ploughing, and pulverized with the harrow, the latter part of July, or the early part of August; and tolerable crops have been raised in this way, particularly of the Flat Turnip, and which may be considerably augmented, by extirpating the weeds with a hoe, and thining, so as the plants will stand about eight inches apart. Mr. Garrigues states, that instead of hoeing, he has been these several years past in the practice of harrowing over his Turnips both ways, when the leaves are about one inch long, which he thinks as good as hoeing, and much more economical. A few Redish seeds mixed with the Turnip, and sown

with them, is said to be an effectual remedy against the ravages of the fly, frequently so destructive to the crops of Turnips.

But the most successful mode of cultivating the Turnip, especially the Ruta Baga, is planting them in roes, and which is begining to be generally adopted among practical Farmers, as the most proper and productive method. Mr. Cobbett is stated to have raised on Longisland, six hundred and forty bushels of Ruta Baga, with the aid of but little short manure, on an acre of worn out and much exhausted soil, some of which weighed upwards of ten pounds.

In this mode of cultivation the soil should be prepared similarly to that intended for a crop of Flat Turnips sown broad cast, by ploughing and pulverising it with the harrow, but three weeks earlier. Furrows are then to be drawn about twenty-seven inches apart by a horse hoe or scraper that throws the earth off both ways, or by a small one horse plough, returning in the same furrow.

In the bottom of the furrows, well rotted barn-yard manure is to be evenly spread at the rate of about fifteen cart loads to an acre; a furrow is then to be run through the centre of the ridge on each side of the furrows, in which the manure is spread, so as to cover it perfectly but not deep, which will raise a ridge or bed over the manure for the seeds, in which they may be deposited either by drilling or planting, if by the drills a small roller drawn by one horse, should be attacked to it so as to follow behind, one wheel of the drill running on each side of the ridge, then dropping and rolling the seeds in at one operation.

If a drill be not at hand, a shallow furrow may be made in the ridge over the manure by a horse hoe, scraper, or some other sutable instrument, and the seeds dropped or planted therein, somewhat thicker than they are intended to grow, covered with a roller or otherwise, about an inch deep.

When the plants have arrived to a proper size, the intervals between the rows should be ploughed with a scraper or small one horse plough, hoed, weeded, and thinned so as to stand from six to ten inches apart, according to the size they are designed to grow, which will be regulated in a good measure by the strength of the soil, and the quantity of manure used. In about ten days after the former operation, the furrows should be turned from the rows with a one horse plough, and thrown back with a scraper or the plough, which should be repeated, with hoeing and weeding as before, as often as circumstances may require.

COUNTERFEIT NOTES.

NEW EMISSION.

PENNSYLVANIA.

Bank of Pennsylvania 5 and 100's,
Commercial Bank of Penn. 10's.
Harrisburgh 5's.
Easton 10's dated Feb. 1824, C.
Farmer's and Mechanic's, Philadelphia 50's, exactly it is said.
Farmer's of Bucks county, 5 and 10's.

Gerard's 5's, dated Nov. 1820.
Northern Liberties, 20's letter G. 2234, dated January, 1815
Philadelphia, 10's many.

DELAWARE.

Bank of Delaware, 5's letter T. well imitated.

MARYLAND.

Bank of Baltimore, 100's, very close imitation, dated Dec. 1, 1818,
Bank of Maryland 3's.
Farmers, 2 and 3's with letter B. well executed.
Franklin of Baltimore 100's dated 1st December, 1819—also 5's

DISTRICT OF COLUMBIA.

Central Bank of Georgetown and Washington, 10 and 100's.
Farmers 10's dated Nov. 1811, D. payable to Jno. Jay—also 5's.
Columbia, 5's, Metropolis, 3's.
Union of Georgetown, 5's, letter B—a close imitation.

VIRGINIA.

Bank of Virginia, 5, 10 and 50's.
Farmer's 100's, letter A. dated April 2d, 1818, payable at the office of discount and deposit, Lynchburg, to William Radford, die work irregular, otherwise well done.
Farmers 10's Fredericksburg.
Romney Bank of the Valley, 100's

SALEM COUNTY AGRICULTURAL SOCIETY.

The following premiums have been agreed upon by the Executive committee of the Salem co. Agricultural Society, to be distributed at the second Cattle Show and Exhibition of the society, to be held at Sharptown on the last Tuesday of October next.

1st, To that Agriculturalist whose farm exhibits the most progressive state of improvement $10
2d, To that tenant whose farm is most improved by his own exertions and industry, 10
3d, For the best Stud Colt under 3 years old and raised in the county. 5
4th, For the best Filly under 3 years old and raised in the co. 5
5th. For the best bull of any of the improved breeds, 5
6th. For the best Bull calf under 2 years old and raised in the county, 3
7th. For the best Milch Cow of the improved breed, 3
8th. For the two best heifers under 2 years old of the improved breed, 5
9th, For the best pair of working Oxen raised in the county 10
10th, For the best full blooded Merino Buck under 2 years old and raised in the county, 3.
11th, For the 4 best Merino Ewes, (shearlings) 4
12th, For the best Buck of the Bakewell breed under 2 years old, 3
13 th, For the 4 best Bakewell Ewes (shearlings)

14th, For the best 4 ewes of the common or any other breed, 2
15th, For the best Boar, 2
16th, For the best Sow with 6 or more pigs 3
17th, To the Person who shall raise the greatest quantity of Flax on not less than 2 acres of land. 5
18th, To the person who shall raise the greatest quantity of Hops on not less than ½ acre of land, 10
19th, To the person who shall make the greatest quantity of Butter, between the 1st July and the 1st of October, from 4 or more cows in proportion to their number.—*Half doz. Silver spoons.*
20th, To the person who shall make the greatest quantity of Cheese, between the first of July and first of October, from 4 or more cows in proportion to the number of cows.—*Half doz. Silve spoons*
21st, For the invention of any approved instrument of Husbandry or any improvement of any one in present use, 4
22d, For the best piece of Linen Cloth not less than thirty yards, 5
23d, For the best Hearth Rug made of domestic materials 2
24th, For the best Woolen blankets not less than two pair, 2
25th, For the best peice of Flannel not less than thirty yards, 5
26th, Nor the best domestic Carpet not less than 20 yards 3
27th, For the best domestic Wine made of Grape or other domestic fruit, not less than 10 gallons, 3
28th, To the person who shall raise the greatest quantity of Wheat, Corn, Rye, Barley and Oats ; from not less than 6 acres of land, for all or either of them 5
29th, To the person who shall raise the greatest quantity of Potatoes, Turnips or Mangel Wurtzell on not less than an acre of ground for each of them, 3
30th, To the person who shall exhibit the greatest quantity of Coccoons of the Silk worm, produced in the county within the last year, 10

A Miscellaneous Committee will also be appointed to view any articles of Husbandry, Mechanical productions, or Manufactures, which may be offered, and premiums will be awarded for such articles if deemed sufficiently meritorious; although none be advertised.

No animal for which a premium was awarded at the last exhibition will be allowed to compete again for the same premium.

In cases where a premium is offered for any article, and only one candidate appears for such premium, and consequently no competition exists, the committee will exercise their discretion in awarding or withholding such premium.

June, 28th, 2826

HEDGE THOMPSON,
1st Vice President.

F. E. M'CULLOCH, *Secretary.*

CUMBERLAND COUNTY AGRICULTURAL SOCIETY.

At a meeting of the Board of Managers of the Agricultural Society of the County of Cumberland, held in Bridgeton on the 28th of April last, it was re-

solved to offer the following premiums, to be determined and paid at the annual meeting and exhibition to be held in Bridgeton in November next.

FOR CROPS.

1st. For the greatest quantity of wheat, the product of the present season, rsised on three adjoining acres of land, taking into consideration the quality of soil and mode of cultivation. $5 00

2d, For the greatest quantity of Indian corn, raised on three acres of ground, 5 00

3d, For the greatest quantity of Irish Potatoes, raised on half an acre of ground, 4 00

4th. For the greatest quantity of Sweet Potatoes raised on half an acre of ground, 2 00

5th. For the greatest quantity of Clover Hay, raised on three acres of ground, 3 00

6th. For the greatest quantity of Clover Seed prepared for market, the product of his own farm, by any farmer in the county, 5 00

7th. For the greatest quantity of merchantable orchard grass seed, 3 00

8th. For the greatest quantity of Mangel Wurtzell, raised on half an acre of ground, 8 00

9th, For the greatest quantity of Ruta Baga turnips, raised on half an acre of ground, 3 00

HORSES.

For the best Stud Horse not less than three or more than six years old, raised in the county, 5 00

For the best Breeding Mare, with a colt not more than nine months old, 5 00

CATTLE.

1st. For the best Bull Calf, not more than eighteen months old, 3 00

2nd. For the second best do. 5 00

3d. For the third best do. 2 00

4th. For the best Milch Cow, to be determined by the quantity and quality of butter, produced in one week, a certificate will be required. 3 00

5th. For the best fat bullock, reference being had to the age and mode of feeding, 5 00

6th, For the best pair of working Steers, 3 00

7th. For the second best do. 2 00

8th. For the best Heifer Calf, not more than two years old, 3 00

9th. For the second best, 2 00

10th. For the best Dishley Buck, from one to three years old, 2 00

11th. For the best Merino do. 2 00

12th. For the best do. of any other breed 2 00

13th. For the best Dishley Ewe 2 00

14th, For the best merino do. 2 00

15th. For the best do. of any other breed, 2 00

HOGS.

For the best Boar, not less than one or more than three years old, 3 00

For the second best do. 2 00

For the best breeding sow, with not less than six pigs, and not more than four months old, 3 00

HOUSEHOLD MANUFACTURES

1st. For the best 20 yards of linen diaper, 3 00

2d. For the best 20 yards of flannel, 3 00

3d. For the second best do. 2 00

4th. For the best pair of woolen stockings, 1 00

5th. For the best pair of worsted do. 1 00

6th. For the best linen do. 1 00

7th. For the best pair of blankets, 1 00

8th. For the best pair of linen sheets, 1 00

9th. For the best bedquilt, 1 00

10th. For the best 20 yards of Domestic Carpetting, 3 00

All articles of Household manufacture, presented for premiums, must be manufactured within one year of the time of exhibition.

PLOUGHING.

For the best ploughing with one pair of horses, 5 00

For the best do. with one pair of oxen 5 00

The ploughing to be not less than 5 inches deep.

E. H. MORE, *Secretary.*

May 2d, 1826.

FROM THE NEW ENGLAND FARMER.

USEFUL HINTS.

Tar for Sheep.—A gentleman who keeps a large flock of sheep, says that during the season of grazing he gives his sheep tar, at the rate of a gill a day to every twenty sheep. He puts the tar in troughs, sprinkles a little fine salt over it, and the sheep consume it with eagerness. This preserves them from worms in the head, promotes their general health, and is thought to be a specific against the rot.

Botts in Horses.—A traveller tells us that the stage drivers on routes leading from Albany to the western parts of the state of New York, in giving water to their horses on the road, mix a little wood ashes with their drink, which they say effectually preserves them against botts.

Salting Cattle and Sheep.—We are informed by a practical farmer, that in giving salt to his cattle and sheep he mixes it with unleached wood ashes. The mixture is composed of one quart of fine salt to one half bushel of ashes. To this composition his cattle and sheep always have access. He thinks it increases the appetite, and preserves the health of the animals.

Ruta Baga.—As the crops of hay this season are and will be very light, it should seem incumbent on the cultivator to use every effort to furnish winter-food for his cattle. Besides sowing Indian corn and millet it may be well to try for a crop of Ruta Baga. Jesse Buel, Esq. of Albany, has for several years, raised fine crops of of this root after gathering crops of grass from the same fields. The manner of cultivating for this crop is thus stated by Mr. Buel in the 3d vol. page 82, of the Memoirs of the New York Board of Agriculture.

"The second experiment was upon a lay, partly of lucern, too thin to be worth preserving, and partly of clover. The first was cut twice for green food, and the latter once for hay. The ground having been manured, was ploughed and harrowed, and the seed drilled in, at the distance of three feet, between the rows, the 28th June.—The crop was cleaned, thinned, and hoed in the usual way; and the product was between five and six hundred bushels, or about sixteen tons, on the acre.

"Encouraged by this success, I this year put in two and a half acres. Being short of pasture, I fed off the clover in June, instead of cutting it for hay: manured, ploughed and harrowed the ground. A man was employed half a day in putting the seed in with a drill-barrow. The crop was between 13 and 1400 bushels. Some of the roots weighed between 15 and 16 lbs. each. The tops, nearly equal in bulk to an ordinary crop of grass, were fed to my cows in November and December, with great benefit to their milk as well as flesh. The roots were pitted in the field."

Mr. Cobbett says, 'the time of sowing ruta baga may be from the 25th of June to the 16th of July, as circumstances may be.' His directions were written for Long Island, and calculated for that climate. We suppose that in New England it would be best to complete the sowing of this plant by about the 8th or 9th of July.

Valuable Discovery.—One of the most simple and useful discoveries in agriculture, is to mix layers of green or new cut clover, with layres of straw in ricks or stacks; thus the strength of the clover is absorbed by the straw, which, thus impregnated, both horses and cattle eat greedily, and the clover is dried and prevented from heating. This practice is particularly calculated for second crops of clover and grass.

ON THE MANUFACTURE OF BUTTER AND CHEESE,

By S. De Wit, Esq. of Albany.

On the subject of manufacturing butter I cannot refrain from saying something more. It will be simply concerning the operation of churning. I last summer visited a farmer near Ithica, who kept a dairy, supplied by about sixteen cows, and conducted in the manner I have been accustomed to see in Ulster and Orange, the butter from which commanded a higher price than any other in that part of the country. The working of a churn was done by a dog.

The machinary for this purpose was simple, It consisted of a circular platform inclined to the plain of the horizon, and moving on an axle throughout its centre. The dog was placed on it near the edge, with a rope fastened round his neck and attached to an adjoining fixture. In this situation, the platform being put in motion, the the dog was obliged to perform the operation of walking on it upwards; by which means the motion was continued, and by means of a simple contrivance communicating with the churn stick, the churning in this manner was performed and completed in about an hour, when the dog was dismissed and received his customary reward, a plentiful repast on milk, &c.

Thus treated he returned to his labour with alacrity when it was again required. The churn held of milk and cream put together in it, about the contents of a barrel. I staid during the process of one churning, and was highly gratified with it: and what contributed much to my gratificatiou was the delicious beverage of buttermilk with which the mistress of the dairy treated me.

I have met with a remark in some English treatise on the subject under consideration, that "a good pasture is too valuable ever to be broken up." If this be the case, let the man who undertakes to prepare a dairy farm, soliloquise in this manner, when he is preparing his pasture fields: I am now about doing what is to be done only once in my life-time, on the farm from which I am to obtain my living: therefore let no pains or expense be spared to have it done in the best possible manner. I will plough, harrow and hoe my field, and raise such crops on it as are best calculated to destroy every kind of vegetable now growing on it. I will make use of every means that can be contrived to enrich the ground- I will pulverize the soil, and level it as much as possible, and then I will make a selection of the best and most suitable grass seeds, and sow them in abundance on it, remembering that *I cannot sow too much* in order to have full crops immediately and to prevent the growth of noxious plants: and if any of these should, notwithstanding spring up, I must go over my field and eradicate them, and in a few years I will have a good clean pasture, which will last my life time, and be retained in the highest state of perfection by means of occasional top dressings, or by scattering some pulverized gypsum over it, and sometimes, perhaps by a scarification, all which will cost me but a trifle compared with the benefits I will receive from them.

The late Governor Morris had several dairy establishments on his estate at Morrisania. On the exquisite flavor of the butter they produced I have feasted at his table. In rambling over his fields and visiting his dairies, among the numerous instructive observations he made on agricultural subjects, one way was new to me, and I considered it worthy to be remembered, and of having the truth of it investigated. It was this—"The older the pasture, the better will be the milk and butter which it produces." Whether this be correct or not, I cannot from my own experience or observation decide, further than this, that some of the most luxuriant pastures about Morrisania, appeared to be very aged, and I know that the butter they produced was most excellent.

CURE FOR WORMS.

A very important discovery has recently been accidentally made by a child eating the Apple or Knot of the cedar tree, of its surprising efficacy in expelling worms from the human system; the child is stated to have been long afflicted with worms, from which all the skill of the most eminent Physicians in the neighborhood, had proved incapable of releiving it, but on its playfully and Providentially eating of the cedar Apple or Knot, no less than three hundred worms were expelled, & the child perfectly cured. Mr. Hannum, the father of the child, immediately published a detail of the circumstance, with the favorable result of other experiments made on other children similarly effected, but as that detail did not appear altogether satisfactory as to precision, in several particulars, the following letter has been addressed on the subject, to the Editor of the "Upland Union," the paper in which Mr. Hannum's communication originally appeared, and the several subjects satisfactorily explained by the Editor of that paper, in answer.

Query. If the cedar Apple or Knot be so efficacious in expelling worms of every description from the human system, why not from the brute or animal; the experiment we think is worth a trial, there is certainly a striking analogy between the diseases of the one and the other.

FROM THE UPLAND UNION.

Sir,—The statement which you have made in your paper of the 13th, inst. with respect to the discovery made by Mr. Aaron Hannum, of the efficacy of the Cedar Apple in expelling worms, has excited a great deal of interest amongst our citizens: but the facts are not stated with such precision as to warrant any experiment by those who are ignorant of the precise meaning of the name "Cedar Apple or Knot." As Mr. Hannum's residence is not known, although you state he belongs to your county, I have taken the liberty to address you upon the subject and to request that you will have the goodness to procure and publish in your Journal, such explanations of that gentleman's meaning as will enable the most ignorant persons to avail themselves of the benefits promised by this important discovery. I beg leave to put my enquiries in the shape of interrogatories:—

1st. Does the Apple or Knot alluded to, grow on the white or red Cedar?

2d. Is the Apple or Knot different from the small berry? Is it that sort of excrescence which grows on the small boughs, varying in size from the hazle nut to that of the black walnut? Are those of the description last mentioned, and of last year's growth something like a nitted Potatoe? Are the Apples which are perfectly dried, like an orchard Apple which is perfectly dried, of any value as a medicine?

3d. If the Apple is of the kind which I suppose it to be, and which has some moisture still remaining in it, how is it to be used? To be eaten like an ordinary fruit or otherwise, and in what quantity? As Mr. Hannum has so kindly communicated the fact itself of their great efficacy, I presume he will not hesitate to add such other

particulars as will enable the mass of our population to administer the remedy proposed, with efficacy and safety, and in proper proportions. I am with the greatest respect,

Your obedient servant. A. B.

New York, June 18th, 1826.

ANSWER.

As considerable excitement has been created in several sections of the union, from the publication made in this paper of the 13th, ult. relative to the important discovery made by Mr. Aaron Hannum, for the expulsion of worms, and in consequence of which we have been solicited to give more particulars through the medium of the above letter as well as by public Journals. We shall endeavour to satisfy the public excitement not only from verbal information, but from ocular demonstration, as to the powerful efficacy of the Cedar Apple upon those within our knowledge, who have taken it, as well as the impossibilty of its doing any injury to those who may eat the Apple.

In the first place we shall answer the interrogatories of "A. B." as far as in our power from the information we have obtained.

1st. The Apple or Knot, is to be found upon the *Red Cedar*; the white Cedar tree is not to be found we believe in this County.

2d. The Apple bears no resemblance in shape or size nor any similarity to the Cedar Berry. The Apple is a sort of excrescence, and which is to be found at all seasons of the year on the small boughs or twigs of the Cedar tree, "varying in size from the Hazle to that of the black Walnut" bearing a strong resemblance to a nitted Potatoe. The Apple which is of last year's growth and perfectly dried, does not look like the orchard Apple, and is not as bitter as those of this year's growth, but as a medicine they possess the same virtue as those that are green, and can be grated or pounded fine, and taken in molasses.

3d. The apple which contains some moisture can be eaten, like other fruit. The quantity Mr. H. recommends, just as they come from the tree is one for every year that the child is old, and to be taken nine mornings in succession, fasting.

From our own experience of the powerful efficacy of the Cedar Apple, we should say that a much less quantity would do—however, the Apple is perfectly innocent and any quantity may be eaten without being attended with bad effects. To prove that a small proportion will answer we will cite a case. A lad 18 years of age belonging to this office eat a piece of last years Apple, about the size of a *Pea*, and in twenty four hours afterwards no less than *twenty-four Worms* were expelled—and another case in the neighbourhood, of a child aged 17 months eat about a half an Apple, and one hundred were expelled, and we are happy to say that in no instance have we heard as yet, that the remedy has failed in having the desired effect.

Nantucket, June 24.

SHEEP SHEARING.

This patriarchal festival was celebrated on Monday and Tuesday

last in this place, with more than ordinary interest. For some days previous, the sheep-drivers had been busily employed in collecting from all quarters of the island, the dispersed members of the several flocks; and committing them to the great sheepfold, about two miles from town, preparatory to the ceremonies of ablution and *devestment.*

The principal inclosure contains 300 acres; towards one side of this area, and near the margin of a considerable pond, are four or five circular fences, one within the other—like Capt. Symmes' concentric curves—and about 20 feet apart—forming a sort of labyrinth. Into these circuits, the sheep are gradually driven, so as to be designated by their ear-marks, and secured for their proper owners in sheep cotes arranged laterally, or nearly so, round the exterior circle. Contiguous to these smaller pens, each of which is calculated to contain about 100 sheep, the respective owners had erected temporary tents, wherein the operation of shearing was usually performed. The number of hands engaged in this service, may be imagined from the fact, that one gentleman is the owner of about 1000 sheep, another of 700, and numerous others of smaller flocks, varying in numbers, from 3 or 400 down to a single dozen. The business pf selecting, seizing and yarding the sheep, creates a degree of bustle, that adds no small amusement to the general activity of the scene. The whole number of sheep and lambs brought within the great inclosure, is said to be 16,000. There are also several large flocks commonly sheared at other parts of the island.

DESCRIPTION OF A GOOD HORSE.

From an apparently very old work of 500 pages, the date of its publication being torn out, I send you an extract, descriptive of a good horse. The title of the book is, "Directions for Hunting and Killing all manner of Chace used in England, with the terms of art belonging thereunto, also, a short account of some peculiar beasts not usually hunted in England, by Nicholas Cox."

I am, &c. T. E. W.

"His head ought to be lean, large and long; his chaul thin and open; his ears small, and pricked, or if they be somewhat long, provided they stand upright like those of a fox, it is usually a sign of mettle and toughness. His forehead long and broad, not flat, and as we term it marefaced, but rising in the midst like that of a hare, the feather being placed above the top of his eye, the contrary being thought by some to betoken blindness. His eyes full, large and bright. His nostrils wide, and red within, for an open nostril betokens a good wind; his mouth large, deep in the wykes and hairy; his thropple, weasand, or windpipe big, loose and straight, when he is reined in by the bridle; for if when he bridles, it bends in like a bow (which is called cock throppled) it very much hinders the passage of his wind. His head must be so set on his neck, that there must be a space felt between his neck and his chaul, for to be bull necked is uncomely to sight, and prejudicial to the horse's wind. His crest should be firm, thin and well risen; his neck long and

straight, yet not loose and pliant, which the Northern men term withy cragged; his breast strong and broad, his chest deep, his chin short, his body large, and close shut up to the huckle bone; his ribs round like a barrel; his fillets large, his buttocks rather oval than broad, being well let down to the gascoin; his cambrels upright, and not bending, which is called by some sickle houghed, though some hold it a sign of toughness and speed. His legs clean, flat and straight; his joints short, well knit, and upright, especially betwixt the pasterns, and the hoofs, having but little hair on his fetlocks; his hoofs black, strong and hollow, and rather long and narrow than big and flat, and lastly his mane and tail should be long and thin rather than thick, which is counted by some a mark of dullness."

On the subject of colour he says, "I dare pass my word, that wherever you shall meet with an horse that hath no white about him, especially in his forehead, though he be otherwise of the best reputed colours, as bay, black, sorrel &c. that horse hath a dogged and sullen disposition, especially if he have a small sunk eye, and a narrow face, with a nose bending like a hawksbill."

From the New England Farmer.

CULTIVATION OF POTATOES.

WORCESTER Co. 4th Mo. 10, 1826.

There has been grevous complaints by the people of Boston for a number of years (and not without just cause) of bad potatoes. I have noticed a number of scientific disquisitions upon the subject, but none that exactly accords with my views. However incorrect I may be in my conclusions upon the subject, I may run but little risk in stating what I think I have satisfactorily ascertained to be the best method for me, on my land, for insuring good potatoes.—About fifteen years since, I purchased some of the common blue potatoes for seed. The seller said the potatoes had heretofore been very good, but he thought they had lost their good quality, and that by changing them (as the phrase is) they would do better. I was young and inexperienced, but I had no faith in his hypothesis. However, the potatoes were ill shaped things, and, when cooked, as free from any farinaceons appearance as a pickled cucumber. I planted them on a piece of land that I was subduing, dunged them lightly with winter dung, which was spread and harrowed in. The crop was middling, and the potatoes, for autumn and winter eating, tolerably good. The next season I manured the same land with winter dung, and ploughed it in; round, fair and middling sized potatoes only were selected from the previous year's growth, for seed; they were planted in the usual way, two in a hill; ploughed and hoed twice. The succeeding autumn they yielded a good crop of mostly round, fair and handsome potatoes, and for eating I never saw better. Their superior quality was noticed by all who ate them. I now considered that these potatoes had regained their original good quality; and that it was affected by selecting the seed *only*; but it was an erroneous conclusion.

The third year the seed was selected as before; a part of the same field, ploughed and manured in the same way as the year before, was planted; some of the selected seed was also planted in a field that had for a number of years been cultivated—here, several rows were dunged in the hill with fine mixed manure, and about as many with only a handful of plaster. In the fall I commenced digging successively of the three different plantings for table use; those dunged in the hill, appearing nearest to maturity, I began upon them first; I found their appearance different from those raised the year before, more long ones, some part eaten by worms, and others with small ones attached to them by narrow necks. They were cooked, but instead of being sound, mealy potatoes, they were but of an ordinary quality—some had hard blles in the middle, and others hollow. I next dug some of those that were plastered; their appearance was better; less small ones, no effects of worms, but less in a hill—when cooked they were some what better than the others, but very inferior to the 2d year's crop. Here my scheme for the improvement of run out potatoes was for a moment frustrated: however, the next trial was upon those in the new field; here the hills afforded a good yield of round, fair and clear potatoes: when boiled, they were as good as the 2d year's growth, but nothing improved. I continued experiments, (always careful in the selection of the seed) and the 4th year ploughed and fenced, with posts and rails, a piece of green sward in my pasture—harrowed in coarse dung and had an excellent crop of the best of potates (some of these I sold in Boston for 50 cents, when they were plenty in the market for 30 and 33 cents.) I also planted around a cornfield two rows; this field had been ploughed 4 years in succession—winter dung ploughed in, and mixed manure put to the hills; these potatoes yielded as well and perhaps some more than those in the pasture, but they were deformed and less farinaceous, and in the following spring there was a great difference in the potatoes. I now believed that to raise good potatoes and to preserve undiminished, the quality of the kind, that something more was necessary to be observed, than the selection of the seed. Therefore, for myself, I adopted the following method, from conclusions drawn from the foregoing experiments, and from general observation and inquiry upon the subject. First, to select such potatoes, shape and size, as I wish to raise. Secondly, to plant them on new or green sward land, two, and not to exceed three years in succession. Thirdly to use no other than winter dung [except the additon of plaster to the hills on vines] for manure dressing, to spread this and mingle it with the soil; being generally free from worms, and its decomposition will be about the time the roots of the potatoes need its nourishment. And fourthly never to plant them on a wet or clayey soil. By observing these particulars I have always had good potatoes, my *Blues* I still keep, and I don't know that I can find better, not withstanding some thought them run out more than fifteen years ago. Whoever is disposed to adopt the above method and perform it, will no more be troubled with the disagreable tang of rank and watery potatoes—and for what they have to spare, the citizens of Boston, I presume, will willingly

pay them a good price. I am of the opinion that good potatoes for table use, are seldom produced from fields that have been long and highly cultivated. Perhaps some of the agriculturalists near Boston may be induced to try the experiment, if it has not been particularly tried. I continue to plough small pieces in my pasture, when I have no green sward of a number of years' standing that I wish to turn up, and find my pasture benefitted by it. I will add no more to the subject this time, but submit the foregoing to the better judgment of experienced and practical farmers.

FROM THE AMERICAN FARMER.

HESSIAN FLY—WEEVIL FLY.

J. S. Skinner, Esq. *Eastern Shore, May* 24, 1826.

Dear Sir,—It would appear that the Farmer, and more especially the grain Farmer, always has something to annoy him, either before his crop has come to maturity, or in getting it in ; or after it is got home either in the house or stack. The Hessian fly maintains its character of being the most destructive insect to the wheat crop, that has ever been known in this or any other country. If the wheat is sown too early, this insect is sure to make havoc in it in the autumn, and too often it makes its ravages in the spring, under all these circumstances. In fact, no human invention or foresight can guard against its effects, thus making the wheat crop a precarious one. But now, and for some two or three years, the Weevil fly has attacked the grain itself of the wheat ; and if not arrested in its progress, it has been known to eat up the substance of every grain, leaving nothing but the skin. It was only last year that farmers began to know the necessity of getting out their wheat early in August, and letting it lay in the chaff, or fanning it out and letting it lay in bulk !

About forty years ago, this same Weevill fly did vast injury to the wheat ; and I do not recollect that the practice was ever so generally pursued as to stop its progress by getting the wheat out early, though advised by, I think, Mr. Jefferson, one of our late Presidentss ; but that it gradually disappeared, until the last two or three years ! If I am right in my recolleetions, that this great man, who stands pre-eminent in science, did some forty years ago make the discovery of the beneficial effects of getting out wheat early in August, and letting it lay in the chaff, and thus destroying the eggs of this insect, by this means, he would do immense benefit to this country by publishing his knowledge and experience on the subject of the Weevil fly. From such a scource of science as Mr. Jefferson, the Wevil fly would cease to do any injury to the wheat after it is cut down. From his pen we might expect the natural history of this insect, which cannot be equalled any where.

GUN SHOT WOUNDS ON FRUIT TREES.

There is a class of effeminate sportsmen, whose skill in gunnery is limited to the murder of the poor Robin, as he chirps among the cherry leaves, and feasts on the fruits preserved from destruction by

his diligent warfare upon the predatory hosts of insects who blast the bud, waste the flower, and consume the harvests of the year.—These indolent gentlemen, without energy to pursue the invigorating and healthgiving chase of the nobler game over hill, by stream, and through valley, without activity to disturb the partridge in his woodland bower, or start the quail from his grassy nesting, without skill to interrupt the flight of the woodcock or the snipe, limit their depredations to the garden and the orchard, and revenge their want of success in the field on those pleasant birds, like the swallows, always the companions of men, whose songs hail the coming spring time, and gladden the decline of the year. The innocent and harmless tenants of the cultivated groves are not the only victims of their unworthy exploits. The trees themselves suffer great and fatal injury. In some respects, an analogy may be traced between the animal, and the vegetable kingdom. The mineral poisons, when taken into the circulation of either, occasion a decline more or less rapid in proportion to the vital importance of the part subjected to their action. On examining the condition of the trees exposed to the visit of those magnanimous hunters, who content themselves with throwing a double handful of shot at a mark a school boy would not miss with a stone, it will be found, that the branches shattered or penetrated by the lead, exhibit numerous black, cankerous excrescences, and present the symptoms of ill health. If the subjects be watched further, it will be noticed, that decay extends itself from branch to branch, and finally seizing on the trunk, corrodes the heart, and the dying plants, rapidly wasting away, stand unsightly objects, with naked limbs and leafless tops, until the winds remove the deformity. Long labour of cultivation, the toil of planting, the care of watering, the precautions against the vicissitudes of a changing climate, are necessary to repair the wanton destruction.

It is easy to trace the cause of these effects. On cutting into a branch where shot has lodged, the lead is found corroded and changed into a white powder, easily taken up by the vessels of the wood, and impairing the purity of the fluids circulated through the whole.

The agriculturalist who strews arsentic in the mangers of his cattle, would be as wise as the cultivator of an orchard, who suffers the fowling piece to scatter its leaden showers among his trees. It were well to recollect that those bills which peck at the berries of summer have been diligently employed during the spring in protecting them from depredation, and that a few cherries may be spared from the table to reward their good services. If they should become exhorbitant in their demands for those fruits, of which nature has given them the fee to collect the necessary food for life, and assigned the reversion to us as pleasant luxuries, it is easy to frighten them from their banquets without destroying their useful lives. A board tied by a string, a tattered garment, villainous old hat, or vile effigy stuffed with straw, elevated on a pole, will be more effectual protection, than the popping of the guns of a whole regiment of the orchard infantry we have mentioned. If they must be sacrificed, however, it would be more satisfactory, to see the shooters proceed in the more scientific and gentlemanly mode of taking the bird on the

wing, than to view them creeping up to the rear feathers, and then after deliberate aim, sending the charge at the head of the victims of "ungentle craft" [*National Ægis.*

METHOD OF PRESERVING FRUIT WITHOUT SUGAR.

The expense of sugar is frequently urged as a reason for not preserving fruits, and to this may be added the uncertainty of success from the strong fermentable qualities of many fruits.—They may be preserved for a length of time without sugar, by baking or boiling, and then closely stopping them up; but if the cork becomes dry, the atmospheric air exchanges place with what is impregnated by the fruit, which then becomes mouldy; but fruits may be preserved in good condition by the following process, for two years, or for a longer time even in hot climates, as some that were done in 1806, have been exposed in an upper room to the sun during the whole of the summer, without injury.

The fruit being clean picked, and not too ripe, is to be put into wine or porter bottles, as they are cheaper than gooseberry bottles, & more easily obtained. The bottles must be filled as full as they can be packed, and corks being stuck lightly into them, they are to be placed upright in a kettle of water, and heated gradually to about 160 or 170 degrees of Fahrenheit, that is to say until the water feels very hot to the finger, but does not scald. This degree of heat is to be kept up for half an hour, and then the bottles being taken out one by one, they are to be filled up to within an inch of the cork with boiling water, the cork fitted very close and tight, and the bottle laid on its side that the cork be kept moist. To prevent fermentation and mould, the bottles are to be turned once or twice a week for the first week or two, and once or twice a month afterwards.

When applied to use, some of the liquor first poured off, serves to put into pies &c. instead of water, and the remainder being boiled up with a little sugar will make a rich and agreeable syrup.

TO PRESERVE FISH.

The preservation of fish for a few days in summer, or during long journeys, can be effected by removing their entrails and sprinkling the internal and external surfaces with a mixture of sugar and charcoal, which will for a considerable period prevent the least taint, and may be washed clean off previous to cooking the fish so preserved.

WINE.

The vine is cultivated in Pennsylvania to an extent, says the Philadelphia Gazette, of which few persons have had any idea. In the immediate neighborhood of the borough of York, there are one hundred and fifty acres of vineyard. In Cumberland county, there are many vineyards, some on the tops of mountains, and some in the bosoms of valleys. In Adam and in Westmoreland, the culture of the vine is also attended to, and one gentleman in Chester has a vine-

yard covering thirty acres. Only a few days ago, a house in Market street, advertised for sale, wine manufactured in the neighborhood of Lancaster.

The extent to which the vine is now cultivated, makes us regard it as no longer a matter of experiment. If similar success should attend the attempts to introduce the culture of Silk, we shall not long be under the necessity of giving out flour to our horses to get rid of it.

BLACK CHERRY—(*prunos cerasus.*)

The gum which exude, from this tree is extremely nutritious; indeed it is equal in every respect to gum arabic. Hasselquist relates that a hundred men, during a siege, were kept alive nearly two months, without any other subsistance than a little of this gum taken occasionally into the mouth, and suffered gradually to dissolve.

STRAWBERRY, (*fragaria vesca.*)

It bas been said that this fruit has the property of dissolving the tartareous encrustations upon the teeth ; and that hence, those who have been affected with the gout and nephritic diseases (stone, &c.) have found great relief by eating them very freely.

OXALIC ACID—(*the acid of sorrel*)

Readily decompose sulphate of lime (gypsum) Parkes. This explains why plaster always benefits clover, &c. on the light grounds which abound in sorrel.

THE FRUIT GARDEN.

The art of inoculating or budding fruit trees, (although the simplest and easiest of all things,) appears to be deemed a mystery by most of our farmers, and is too generally neglected, under a belief that it is a difficult or expensive operation. If the following short directions should prove the means of changing even one thorn bush into a pear or quince tree, I shall be fully paid for the trouble of scribbling them down.

In the month of August and fore part of September, cut from the tree you wish to increase, some of the young wood of the last summer's growth, (the cuttings should be thrifty and healthy) cut the leaves off, leaving about half an inch of the foot stalk on the cutting; at the foot, and immediately above the foot stalk, *lies the bud*; with a keen knife begin to cut half an inch above the bud, and bring out the knife a little below, taking about half the woody substance with it; then separate the bark from the wood, carefully observing that the bud be not injured in the operation. If the operation be properly performed, the bud will be separated from the wood, and remain unbroken and entire in the bark; this bark and bud is now to be speedily inserted into the tree you wish to change. Choose a smooth spot in some young and healthy branch, or sprout, and with a keen knife cut gently through the bark, about one inch in length, a sm-

cross cut near the upper end; separate the bark gently from the wood at this cross cut, being careful not to wound the bark or wood, and immediatly insert the bud, laying it smooth and even under the bark of the tree; with a string or bass wood bark, or woollen yarn, tie it in so as to hold it close to the wood, being careful not to injure the bud nor foot stock—and the operation is done. In two or three weeks after, the bud will have united to the wood, and the tyings should be loosened or taken away. The bud will remain dormant until the next spring. In April following, they should be examined, and if the buds then appear healthy and vigorous, the branch shoud be cut off immediately above the bud, and removed: in a few weeks this bud will take place of the old branch, and in two years produce fruit of the kind you wish.

By this simple operation, the ordinary sour peach tree, which is an incumberer of the ground, may be made to yield the delicious Rare Ripe, the Early Ann, or other favourite peaches; or may be converted into a plum tree: and the ordinary *wild plum tree* may be made to yield the richest and most delicious of our cultivated plums and peaches; our thorn bushes may be made to yield the rich and luscious pear: and our crab apple stalks be loaded with the finest varieties of our cultivated apples and cherries; apricots and nectarines are equally susceptible of improvement by the same easy means; nay, our wild gooseberry bushes may be converted into the best varieties, and our native grape may be made to yield an elegant dessert fruit.—All which I know by EXPERIENCE.

MAMMOTH OX.

A few days since, on a farm, in Greenland, belonging to. M. C. Pierce, Esq. of Portsmouth, an ox was measured, seven years old, of an extraordinary size. His girth, just back of the fore legs, was nine feet one inch and a quarter. His length, from his nose to his shoulder blade, was four feet, minus two inches, and from thence to his rump eight feet and two inches, making his length exactly twelve feet. His breadth across the back, from one hip joint to the other, is four feet nine inches.—He weighed in Jan. last, three thousand and thirty-eight pounds, and is now probably two hundred at least heavier.

He had no remarkable keeping for the first two years of his life; but the owner finding how rapidly he grew on common fare, has kept him nearly under the full force of feed since.—The animal is well shaped and sprightly, and although they call him of common breed, he descended, no doubt, from the stock of cattle imported by Governor Wentworth, about sixty years ago.

TO DESTROY VERMIN ON HOGS, HORSES AND SHEEP.

A North Carolina Farmer answers the enquiries, respecting vermin on hogs. He recommends TAR.—If instead of tar you take lamp oil, and rub it on when the hog is clean, it will destroy both lice and

knits. Hogs should be kept without litter, except in extreme cold weather, when clean straw should be furnished twice a week. In summer hogs should at all times have water where they can wallow, and the animals will keep on a coat of mud so as to prevent flees or flies from being troublesome. The same Farmer requests information respecting vermin on horses, cattle and sheep. For horses—first clean your stables and whitewash every part, then card the and brush him well with a hand brush, so as to get the skin clean—take the fat of boiled bacon, while soft, and rub it all over with the hand brush ; tie him short, so as to prevent his turning round his head (or he will lick the fat off) litter with clean straw and burn it in the morning—lead the horse to water and take care he does not roll—in three days repeat the rubbing with the same precaution as to tying and rolling. The vermin burrow between the outer and inner skin, eat off the roots of the hair, and this occasions itching, which causes the animal to rub his hair against trees and fences. Cleanliness and good keeping are the greatest safeguard against disease and vermin.

With respect to sheep, nothing can be done except you shear them, which may be done at any season, taking care to keep them housed in cold weather and rain ; after shearing rub them well with soft soap ; they will be clear and clean in a few days. If the vermin adheres to the fleece take a flour barrel without heads, dig a small hole in the ground, put in tobacco stems and saw dust, set it on fire, place the barrel over the hole with a few smooth sticks over the upper end of the barrel, and spread your fleece over the sticks, sheer side down, and in a few minutes the smoke will clear off every species of vermin.

TO DRIVE INSECTS FROM TREES.

Bore a hole into the trunk of the tree, as far as, or into the heart, fill the hole with sulphur, and place in it a well fitted plug. A tree from four to eight inches in diameter, requires a hole large enough to admit the little finger, and in the same proportion for other larger or smaller trees. This will usually drive the insects away in the course of forty eight hours, but uniformly succeeds, perhaps sometimes after a longer period. These facts were related to me by the Rev. Dr. Woodruff. He stated that a fine large shade tree in Albany, was so infested with worms and catterpillars, that passers by were obliged to make a circuit to avoid it ; it became so much of a nuisance that they were on the point of cutting it down, when application of this experiment in forty eight hours entirely cleared it of the insects. Col. Rutgers, of New York, has tried this experiment with uniform success ; and instances, fruit trees which were almost lifeless, were restored. [*Sillimans Journal.*

TO THE LOVERS OF GOOD BEER.

Put 2 quarts molasses into a keg with 10 gallons of cool water. Boil 2 oz. alspice, 2 oz ginger, 2 oz. hops, and half pint indian meal, in

two or three quarts of water about an hour—strain it into the keg while hot—add 1 pint yeast—shake it well together—stop the keg nearly air tight; and let it stand about 24 hours, when it will be fit for use. The whole expense of this quantity will not excede three shillings.

SUGAR FROM POTATOES.

M. Gall of Treves, in Germany, has published a work in which this is highly recommended, and stated to be more profitable than the extraction of sugar from the beet. One hundred pounds of the latter (he says) yield scarcely four pounds of sugar, while eleven pounds of sugar are obtained from 100 pounds of potatoes. The author adds, experiments made by the celebrated chemist, *Dobereiner*, which prove that two lbs. of potatoe sugar, put to ferment, give as much alcohol as one lb. of cane sugar, and that liquor may thus be advantageously manufactured, of the nature of rum.

FROM THE NEW JERSEY JOURNAL.

THE LOCUSTS.

Description.—Body black; abdomen encircled with yellow rings; four wings, transparent, membranaceous and furnished with yellow veins; legs, six, all formed for walking or creeping; antennae setaceous, and deflected at their extremities: fore part of the head triangular and terminating in a long rostrum or beak which passes under and lies close to the thorax. It has no palpi or feelers. The male is furnished with two peculiar drum-like organs, situated beneath the wings at the junction of the abdomen and thorax, with which he emits his monotonous note at pleasure. In the larva and pupa state, they resemble the perfect insect except in colour and in being destitute of wings.

The insect of which the above is a description, and which is now about terminating its visit in this district of country belongs to that genius of heminterous insects designated by Linnæus under the name "*Cincada*, of the *maniferæ* family, and species Septendecem. Early in the spring of the year of their appearance, they are found by ploughing up the ground and removing large stones, and are very lively, darting into their holes and anxiously shunning the air and light till the time for their appearance above the surface, when, they leave their cells in the earth, and enveloped in a shell which is pliable and moist, so as to admit of a free motion, they emerge to the surface during the night. Instinct teaches them this precaution, the neglect of which would inevitably and effectually imprison them; for such is the effect of the heat of the sun upon their shells, that it dries up that moisture which preserves their flexibility; their motions must consequently be checked, and their advancing to situations proper for the effecting of their release, must be necessarily prevented. To burst through the shell even in its moist state requires in them the full extent of their power, and when that shell becomes indurated by the rays of the sun, all their attempts to liberate themselves must prove, ineffectual. By emerging during the night, this induration is obviated; the dampness of the air and the

dews on the surface of the earth preserve their moisture until they can crawl to a proper situation, where they can fix their claws into some hard substance; which done, by a wonderful provision in their nature, the shell opens on the back, and the insect liberates himself, leaving his shell firmly adhering to the tree or fence to which he first attached himself The appearance of the insect when first freed from his prison is much the same as before, with the addition however of wings in embryo, of a whitish appearance. To these the enlivening influence of the sun soon gives strength, consistency and colour, and imparts a lustre and beauty to the whole animal unknown to it before. The period of their existence in their perfect state, is about six weeks; their first appearance being in May, their death taking place in June. They inhabit trees, without seeming to have a predeliction in favour of any one in particular, but flying indiscriminately from one to another. They are eagerly sought after for food by other animals, not only in its perfect and grub state, but even in the very egg. Other insects, birds and beasts and all carnivorous animals devour them without scruple, and former accounts inform us, that the North American Indians esteemed them a sumptuous feast. Many have feared that they would prove destructive to vegetation,* but is is not known that they *eat* any thing; but from analogy we should presume that they sustain life by sipping moisture from plants or by imbibing the dew; being furnished with a long rostrum or hollow tube extending from the head down to the breast. Linnæus has remarked that only perfect insects can continue their species, and as far as we can judge to fulfil this end in their economy is the sole cause of their last transformation. For this purpose, the female is furnished with a dart composed of three parts; two side pieces, enclosing a middle shaft, with which the insect penetrates the bark of the tender branches of trees, and deposits its eggs in holes arranged in longitudinal furrows, till having exhausted its store it closes its short existence.

Their transformation.—After the egg is deposited in a favorable situation, it is hatched in about six weeks—unfavorable circum.

---

* It is asserted in the Journals on the authority of the Richmond Compiler' that the Locusts in that district infest and commit great ravages in the Oak forests. If this be the fact, it must be a different insect from the Locusts here; for we cannot perceive that our visitor eats any thing, and if it commits any depredations on the trees, those depredations must consist in the mere stinging of the trees when the insect deposits its eggs, which injuriously affects those twigs only which are the growth of the last year, for I have found that the old twigs although stung, are nevertheless flourishing as ever, while the young branches appear to droop. Another reason for supposing that the insect of which the Compiler speaks is of a different species, is, that the species prevalent here seldom extends over so large an extent of country at the same time, but that it appears in different parts at different times. In the neighborhood of Philadelphia, for instance, they are not, as far as I can learn this year, but I am informed that they did appear there in 1818; this corresponds with a notice I lately observed in an old magazine, which states that they were visiting that district in 1766, between which time and 1818, there are three regular intervals of 17 years each. Another ancient periodical publication informs us, that a very peculiar insect which answers the description of our locusts, appeared in that same district in 1715, which calculation shews to be six periods of 17 years each, before 1818.

stances, (such for instance as the rapid growth of the shrub or tree into which the animal has made its incision) may considerably retard its extrication from the egg. As soon as the young insect is hatched it runs down the branches and trunk of the tree to the earth, and eagerly seeks a fit place to enter it, as if sensible of the danger of exposure to the heat and light. From this time until they emerge in their pupa state, to undergo their final transformation, they lay hid from the observation of man—to what depth they descend is uncertain. Mr. Bartram states that he has seen them ten feet below the surface. How long they remain in the larva—how long in the pupa state, is, I believe, as yet unknown, but the whole duration of their life is without doubt seventeen years. How wonderful and inscrutable to the designs of providence. The same unerring hand that has made a world and the noblest animal that inhabits it, has watched with minute wisdom over the formation of this insect: and for wise though hidden purposes has ordained it to descend into the depths of the earth, there to live till its appointed time, then by a wonderful process to arise, unfold its beauties to our view, to flutter about a few days, and die.

M. LA FORFST'S

METHOD OF DRESSING FLAX WITHOUT ROTTING OR BOILING.

From the Edinburgh Farmer's Magazine.

"In his habitual and close examination of the nature and properties of those two textile plants, the flax and the hemp, and likewise of the spindle and the loom, M. La Forest found out (which is supposed to have remained undiscovered until now) that both the external coat and the internal filaments of the stem, are bound by two different kinds of a gummy substance; that the external one, which binds the outward coat or straw, is separable and soluble in water; that the other cannot be separated but in the form of dust, and is not soluble in water. The first he considers as a gum or rosin; to the second, which hecklers call oily essence or unctuous tract, he gives the more appropriate name of gluten. This is perfectly insoluble, and is found still remaining in the last and oldest rags of cloth. It has been fully ascertained that the essential strength of the filaments, of both the hemp and the flax, consists exclusively in this glutten; and that it has been erroneously ascribed to the gummy and mucilaginous substance, by which the external coat is bound. This discovery has thrown quite a new light on the principle and process of, what they call *demagogue* ungumming. This operation has been generally performed, to this day, by steeping the bundles of hemp and flax in either running or stagnant water, but in the mistaken notion that the length and strength of the fibres depend greatly on a due proportion of the gummy substance being preserved, and that they may be impaired by a protracted steeping, this operation of water-rotting has been incompletely managed, and it could hardly be better managed, as too short a steeping was inefficient, and a protracted one deleterious. There was, besides, the deadly nuisance of poisoning the air and water.

The several attempts made to substitute chemical and mechanical processes, for the old one of water rotting have uniform ly failed, because they were generally impressed with the idea that they should leave the greatest possible portion of the gum adhering to the filaments. Hence reverted to their old method of steeping, fully convinced that no mechanical apparatus could ever succeed without the assistance of chemistry.

Now, that an important distinction has been made in the nature and essential properties of the gummy soluble substance and the unalternable gluten, the essential part consists in separating the one from the other, dissolving the gum, and preserving the minutest particles of the gluten The invaluable result has been obtained by M. La Forest's discovery.

We have no drawing of M. La Forest'e machine ; and what we know of its principles and mode of action is, that it unites the several processes of the former method, or rather their combined effects without any chemical preparation, without the use of water, or any system of wheels or rullers of any kind, either plain or fluted—The inventor calls his machine a rural mechanical break : and so simple is its construction, that any intelligent farmer could make one for himself ; it consists entirely of wood, and its price does not exceed twenty dollars.

An association was formed for the purpose of propagating the use of that beneficial machine, and superceding the dangerous practice of water rotting. At the head of the list is the name of the Duke of Orleans. Government was not backward in encouraging a discovery, which seemed to secure to France the merit of having solved the highly interesting problem of the dressing of flax and hemp by a dry process. An exemption from the stamp duty, besides other advantages was granted to the inventor. The public themselves, by far the most impartial and unexceptionable of juries, were enabled to judge of the effects at least, of this machine. At the last exhibition of the produce of national industry in the Louvre, several bundles both of hemp and flax were produced that had been dressed by the dry process of the mechanical break, their external appearance excluded the possibility of deception and doubt.

The whole length of each stalk was divided into three distinct parts, from the root upwards. About five inches of the thickest part, from the root, had the rind untouched, and in its raw and natural state. The remainder of the stalk was divided into two almost equal parts ; one of them showed the preparatory working of the break on the stems and the rind that surrounded them. They were actually stripped of their external coat, or straw, the minute fragments of which had been gathered, without any mixtures of the fibres of flax or hemp, they were kept in a box. Nothing remained of the fibres but a thin internal coating, in the shape of long narrow stripes still bound together by their gum. The other and last part had these filaments entirely divested of their gummy mucilaginous matter, and herbaceous pith, which had been put in another box. They were separated throughout the whole length, as they would have been by the finest heckle, showing their natural colour, and the

whole of their pure vegetable gluten. They felt soft and silky to the hand, and required no other preparation than to be actually spun.

The experienced agriculturalists and manufacturers who have examined the specimens of flax and hemp prepared by the new process, agree in their opinions that the filaments of the stalk are entirely stripped of thir gum, without any alteration of their fibres; and have preserved a greater degree of their strength and elasticity than could ever be expected from the best managed water rotting; that there is besides, in the whole preparation, a saving of at least two thirds of the ordinary expense, indepently of the fibres being fuller and longer, with a much less quantity of tow.

It must not be forgotten that the external coat or straw, which after water rotting, could be only partially employed in the making of notches, but chiefly as fuel, may be easily, as it drops from the dry break, converted into a paste for the making of paper, as a substiute for rags ; a dear article, the price of which is constantly on the increase. The experiment has been made, and the produce of this new material, it is said, may be compared to the finest specimens of Chinese paper. We hope to be able soon to procure some of these specimens both of the paper and of the stalk, showing the process of the new operation of which we speak.

SOILING STOCK.

The following communication from a respectable farmer of Delaware county, detailing his system of soiling stock, was read at the stated meeting of the Philadelphia Society for Promoting Agriculture, Aug. 16, 1825.

"Nineteen head of horned cattle, four horses and eleven hogs, are fed five times daily, in the stable, and in the intervals they are kept in the barn-yard, having a shed and a stream of water by its side. The manure from the yard and stable is regularly hauled every day to an adjoining yard, and covered with a layer of earth. A change of grass is provided for the stock. When the second growth covers the fields first cut, the cattle are then turned out to pasture, until the mower's ground in like manner, affords a good bite. The grass for soiling is cut early in the morning, and enough is then cut to last all day, and for the first feed of the next day. Care is taken not to trample upon the grass in the cart. The advantages derived from the practice pursued, when compared with pasturing all the year, are, increase of stock, and consequent increase of manure, to be applied when and where wanted; an efficient hand ready in harvest, who was before occupied in soiling, and the preservation of an uniform surface in the land, owing to the cattle being kept off, when the earth is open and loose in the spring. The manure is thought to pay for the additional labor incurred during the time of soiling. The cows do not milk so well as when pastured, but the same number could not be kept in that way, as are now maintained. No stable manure has ever been bought for this farm, which is now in a high state of fertility."

FROM THE NEW ENGLAND FARMER.

RAILWAYS.

We have seen a model of an improvement in Railways invented by Messrs. John Brown and George W. Robinson, of Providence, which, it appears to us will prove of very great utility. It consists in raising and lowering loaded teams by a balance and lever power, similar to a scale beam. The carriages running on these railways will proceed on perfect levels, except at certain places or platforms in which by the operation of levers and weights, the carriages, &c. are raised or lowered, as the case may require, from one level to another. This is affected in from one to three minutes, by a simple process requiring less strength than one man can conveniently exert. The horses will travel beneath the carriage, and thus be protected from rain or snow.

The same gentlemen have likewise invented an improvement, by which carriages travelling in opposite directions, can pass each other on Rail ways with facility and with but little delay or trouble. Models of these inventions may be seen at the Agricultural Repository of Mr. J. R. Newell, 108, State street.

Many gentlemen have viewed and approved the above invention. It is calculated to overcome, with rapidity, all irregularities in a road, from 4 feet to any height. The waggons are always to carry the same burden (which can be regulated by weights added to the load when necessary) which the elevators are to be arranged to balance so exactly that less than a pound weight will turn them, when the load and counterpoise are 20 tons. A slight pulling of a string, by the driver, will secure the benefit of an elevator as oftenas one is arrived at. The inventors calculate that their carriages for passengers, & forburden will travel at the rate of seven miles an hour, & the goods can be delivered at that rate of speed. The carriages will glide over the Railway with such ease that lady passengers may attend to their sewing, if they please, or they or other passengers may read if agreeable.

The inventors have taken care to secure a Patent in England.

PEACH TREES.

Mr. S. Gladden, of Richland county Ohio, has communicated to the Editor of the Western Herald information respecting the peach tree which he considers highly valuable. He had observed that peach trees in old settled countries are apt to die in the lapse of fifteen or twenty years; and, to remedy this evil last year he grafted some peach tree limbs on the wild cherry, which grew as grafts do generally. Peach trees die with a disorder in the root occasioned by the operation of a kind of grub worm, which does not exist in the new countries. The wild cherry is known to be a long lived tree and flourishes as well in old as new countries. Now, by grafting the peach on the cherry, some distance above the ground, so as to give the tree a cherry root, no good reason can be assigned why such a tree would not last for an age, seeing the grub never works on the root of a cherry. He recommends that the experiment be

tried by inoculation, or grafting in the manner called capitulating by horticulturists and nursery men; because the usual way of splitting the stock leaves too large a wound, from which the gum issues.

TARRING TREES.

It has been found that the mixing of any kind of oil with the tar used in tarring trees, preserves it in so moist a state for some time as to preclude the necessity of repeating the operation so frequently as heretofore has been found necessary.

SCAB IN SHEEP.

The shepherds in Spain cure the scab in sheep with an ointment made of the trunk and roots of the juniper, by breaking them into small pieces, and infusing them in water without adding any thing else.

Effectual method of Preserving Wheat from Weavel.

A respectable farmer says, that the *leaves of elder*, scattered among the sheavs of wheat while stacking will effectually prevent its injury by weavel. He states that he has been in the practice, for several years, of using elder leaves this way, to keep off the rats; and, that last year, his wheat was perfectly free from injury of any kind, while the destruction by weavel was so universal through the whole country. He says that his brother's wheat, which was stacked only a few rods distant, without the elder leaves, was entirely spoiled.—Another gentleman in the same neighbourhood, seeing the beneficial effects of this experiment, spread some of the elder leaves, over a cask of wheat which had been thrashed in the early part of the season, and it was preserved entirely from the ravages of either weavel or rats.

LIGHTNING RODS.

The season (July) is near at hand, when your barns will be filled with the products of your fields. And it is certainly desirable after the labor and expense of filling them has been met, that they should be *preserved* to *remunerate* this labor and expense. You must however, be sensible, at least you will be, if you will recur to facts, that your expectations of reward by your toil are often cut short by a sudden stroke of lightning. This you can prevent by erecting lightning rods to your barns. The last season after the summer crops were gathered, a greater amount of property was destroyed by lightning, in the county of New Haven, alone, than would have furnished lightning rods to every barn in the state. It must then certainly be unwise to risk such an amount of property, when it can be insured at so low a premium—After close examination for fifteen years, I fearlessly assert that during the months of July and August, that is; after your summer crops are lodged in your barns, a greater number of barns are struck by lightning, by twenty to one than any other object of equal height and number. The reason is obvi-

ous to a careful observer, at least it is so to a philosophical one. The exhalations which arise from the barn filled with hay and grain recently gathered, are great, and form a column of rarefied air, which reaches to a great height in the atmosphere. This column is a direct attractor and conductor of the electric fluid, as much so, as the smoke of an extinguished candle is to an approximating flame. Erect Lightning rods to your barns, and the fluid is conducted harmlessly to the earth. *Conn. Journal.*

COLTS.

Colts are generally folded about the beginning of summer, and it is the custom to let them run till Michaelmas with the mare, at which time they are to be weaned. When first weaned they are to be kept in a convenient house, with a low rack and manger for hay and oats; the hay must be very sweet and fine, especially at first, & a little wheat bran should be mixed with their oats, in order to keep their bodies open, and make them eat and drink freely. When the winter is spent, they should be turned into some dry ground, where the grass is sweet and short, and where there is good water that they may drink at pleasure. The winter after this, they may be kept in the stable, without any other care than that which is taken of other horses: But after the first year, the mare foals and horse foals should not be kept together. There is no difficulty to know the shape a foal is like to be of; for the shape he carries a month he will carry at six years old, if he be not abused in the after keeping.

SPAVIN.

The following is said to be a sure and certain cure for the Spavin.

Take one pound of angle worms, fry them well in a pound of butter, and after it is cool, add one gill of spirits of turpentine.

Take one oz. Origanum Oil, (sold at the Druggists,) which mix in one gill of spirits of Turpentine.

Every morning, rub the Spavin with the Angle Worm mixture *heated* in a shovel over the fire.

Every evening rub the Spavin with the Origanum Oil mixture.

By the time these are used, you will begin to see the horse improve.

During the operation, it will often appear to make him worse; but this must not be regarded as injurious. It does not remove the lump, but the disease will be extirpated.

[This *Receipt* was communicated to the Editor of the American Daily Advertiser by practical men, on whose integrity and judgment he can fully rely, and is here offered as a service due to a noble and useful animal.

FROM THE NEW YORK FARMER.

OATS.

Mr. Editor—I have been a reader of your paper ever since its

commencement, and I now begin to think it is high time for me to make a communication to you, which I believe will be beneficial to my agricultural brethren, and if you are of the same opinion, you will please to publish it, or such part of it, as you see cause.

The subject which I propose, is that of the more extensive cultivation of Oats. Various are the kinds of Oats. The Barley or Scotch oats so called, I have cultivated, but not with very good success; their weight is generally about 42lbs per bushel.—I have seldom been able to raise more than from 20 to 25 bushels per acre. The black oats I have cultivated; their weight is about 36 lbs. per bushel, and produce about as many bushels per acre as the barley or Scotch oats. The greatest objection I have to the barley or Scotch oats, is, that they must be harvested suddenly after they are fit, in order to prevent waste. The common oats which are raised, I consider preferable. My average crop of late years has been from 40 to 50 bushels per acre, and in one instance 65 bushels per acre.

I make oats principally and generally speaking, my first crop in the line of a rotation of crops. I break up the peice intended for this crop in the fall, if possible, and in the spring cross plough and harrow thoroughly before I sow my grain; then harrow again until the turf is well pulverized; then sow ten bushels of clover seed chaff per acre, and roll it in. As the grain is harvested, and the young clover has received its growth, I plough it in.—This clover with the stubble is about equal to a common dressing of compost manure. In the fall plough, in the spring cross plough, after taking from my compost heap thirty loads per acre, which are carefully spread. The lot being then well harrowed and furrowed is ready for planting, either with corn, potatoes or turnips. This is my second crop.

For my third crop I again sow wheat, peas, flax, oats, &c. and stock the lot down with herd grass and red top, which I believe makes the best hay. I let the lot remain in grass three years. Thus you will observe I till three years, and mow or pasture three years. My first and third crop is principally oats.

I have frequently been told that oats and corn were very impoverishing crops; but I find no difficulty in enriching my land as above stated. Ten years ago my average crop of corn was from 20 to 40 bushels per acre. But in passing over a lot the second time which was managed as above in the summer of 1821, I had the satisfaction of harvesting 96 bushels of corn per acre, and received the Society's premium. My other crops have advanced about the same proportion.

The enquiry will naturally be made, what I do with my oats? Well sir, after I have reserved for my stock and for seed, I take the remainder to my mill and manufacture them into flour and meal. It will be understood that the oats are kiln dried, then hulled about as clean as rice, then ground and bolted or sifted, as the case may be. That which I bolt is calculated to be mixed with the wheat flour, for bread: in which case the oat flour being kiln dried, must be scalded before it is mixed with the wheat flour, otherwise the bread will be too dry. Good oat flour prepared as above, mixed with

wheat flour half and half, will make as light and pleasant bread as common country wheat flour, and it will trouble good judges of bread to tell it from clear flour bread. Again, it is excellent to make buttercake, by the Yankees called slapjacks. The oat meal is calculated for puddings, and is a substitute for rye meal for bread. In either case the oat meal must be scalded before it is mixed.

Thus, after supplying my family, the remainder is for market. The oat flour I have generally sold in Boston and New York to the druggists. The meal is also purchased by the druggists. I have generally sold them oat flour for from four to five dollars per hundred, and the meal from three fifty to four fifty, which is, by them, retailed as medicine, from twelve to twenty cents per pound.

The meal is frequently bought by foreigners by the barrel, or hundred, for family use. The sale of oat meal is at present rather limited ; the reason is, that but very few people in this country save foreigners, are acquainted with the use of it, except for medicine. Foreigners generally prefer oat meal to flour. I really hope both for our health, and the interest of Agriculture, that the time is not far distant, when oat flour or meal will be used in every family for food.

Much may be said as to the value of this article as medicine, as well as for food. It has been a common article for food in Scotland and Ireland for many years. Seldom, if ever, an English, Scotch, or Irish vessel sailed without a supply of oat meal ; and I may say, it would be well for every commander of an American vessel, in making up his order for ship stores, to include a sufficient quantity of oat meal or flour for his voyage. As I am one of the homespun family, and wish for information, I hope these few remarks will draw something from more able writers.

MANUFACTURES.

A correspondent of the New York Times, speaking of a late visit to Jersey City, gives the following account, among other things, of the flourishing manufactories there, and at the adjacent village of Harsimus.

"We made a part of our visit to the Jersey Glass Works, established by Messrs Dummer, & Co. at this place, and were politely conducted through every part of the extensive works by one of the directors. It is the property of a company, incorporated with a capital of two hundred thousand dollars, and gives employment to about an hundred persons, and a considerable degree of stir and interest to the little village of Jersey city, in which it is situated.—The business of making, cutting, engraving and painting of the glass, with other branches incidental to the manufacture and finish of that beautiful and valuable article, in all its variety of shapes and uses, are carried on by the company, with a spirit of zeal and enterprize second to few, if any, of our mauufacturing establishments in the country. Specimens of their work compare with the finest from any part of the old world.

A short mile north of this in the same township of Bergen, but village of Harsimus, is the Carpet Manufactory of Messrs. Haight, brought into "the full tide of successful experiment' ' this spring, with a capital of $400,000 ; it gives business to about an hundred hands here, in weaving, finishing and packing the goods, from yarn spun at the other branch of their manufacture, at Little Falls, where about the same number of persons is also employed. The product of the company at present is about 5 bales, of 500 yards each, or 2500 yards per week, which finds a market in preference to foreign ingrained carpetting, at 90 to 120 cents per yard. A little settlement is naturally growing about the manufactory, Messrs. H. having already brought 300 persons from New York to the place since their commencement there.

MANUFACTURE OF LINENS.

A company in N. York, have recently established on an extensive scale near Waterford, a Factory for the manufacture of Linens, and propose to carry on this important branch of trade, in the most approved manner. The company offer $500 for the best models of machinary to be used in the manufacture of the raw material, and $1000 for the best essay on the different processes, by which the cloth is to be preferred.

ON THE MANAGEMENT OF BEES.

BY DR. JAMES HOWISON, OF HILLEND.

[*From the Memoirs of the Caledonian Horticultural Society*]

It being my intention to describe to the society the management of a single hive of bees, from their swarming until they themselves have sent forth their first colony, I shall remark on the different operations, as they naturally succeed each other, according to the method now in general use; leaving that followed by me, of taking the honey without killing the bees, to be explained under a distinct head.

Variety of Bees.—To the common observer, all working bees, as to external appearance, are nearly the same; but to those who examine them with attention, the difference in size is very distinguishable; and they are in their vicious and gentle, indolent and active natures, essentially different.

Of the stock which I had in 1810, it required 250 to weigh an ounce; but they were so vicious and lazy, that I changed it for a smaller variety, which possesses much better dispositions, and of which it requires 296, on an average, to weigh an ounce. Whether size and disposition are invariably connected, I have not yet had sufficient experience to determine.

Materials and size of hives.—Hives made of straw, as now in use, have a great advantage over those made of wood or other materials, from the effectual defence they afford against the extremes of heat in summer, and cold in winter. That the hives in size should

correspond as nearly as possible with that of the swarms, has not had that attention paid to it which the subject demands, as much of the success in the management of bees depends on that circumstance.

From blind instinct, bees endeavor to fill with combs whatever hive they are put into, before they begin to gather honey. Owing to this, when the hive is too large for its inhabitants, the time for collecting their winter store is spent in unprofitable labor, and starvation is the consequence. This evil also extends, to occasioning late swarming the next summer; it being long before the hive becomes so filled with young bees as to produce a necessity for emigration, from which cause the season is too far advanced for the young colonies to procure a winter stock.

I should consider it as a good rule in all cases, that a swarm should fill two thirds of the hive. The hives used by me for my largest swarms, weighing from five to six pounds, will contain two pecks measure of corn, and will yield, in a good season, 8 Scots pints of honey, and for smaller swarms in proportion. Hives with empty combs are highly valuable for second swarms, as the bees are hereby enabled much sooner to begin collecting honey.

Situation for hives.—That the hives should be so placed as to receive the rays of the rising as well as meridian sun, is of considerable importance; heat and light appearing the principal stimulants to the action of bees. A hive so situated as not to be touched by the sun until some hours later than the other hives in the same garden, would in the course of the season lose a proportionable number of days labor. Hives should stand at some distance from walls and hedges. When lately building a garden wall, with a good exposure for bees, I ordered a number of niches to be made, into which I afterwards put hives. These were, however, so much infested with snails in summer, and mice in winter, that I was under the necessity of removing them to a more open situation.

Feeding the bees.—Near the sea, little honey is collected after the first week in August; but in high situations, where the flowers are later, and health abounds, the bees labor with advantage until the middle of September. These are the proper periods, according to situation, for ascertaining if the hives intended to be kept contain a sufficient winter stock. The killing of the drones, (a very singular fact in the history of the bee, and which will be noticed hereafter,) perhaps marks this time with more precision.

If a large hive does not weigh thirty pounds, it will be necessary to allow it half a pound of honey, or the same quantity of soft sugar, made into a syrup, for every pound that is deficient of that weight; and, in like proportion, to smaller hives. This work must not be delayed, that time may be given for the bees to make their deposit in their empty cells before they are rendered torpid by the cold.

I must here notice, that sugar simply dissolved in water, (which is a common practice,) and sugar boiled with water into a syrup; form compounds very differently suited for the winter store of bees. When the former is awnted for their immediate nourishment, as in

the spring, it will answer equally well as a syrup; but if to be laid up as store, the heat of the hive quickly evaporating the water, leaves the sugar in dry crystals, not to be acted upon by the trunks of the bees. I have known several instances of hives killed by hunger, while some pounds weight of sugar in this state remained in their cells. The boiling of sugar into syrup forms a closer combination with the water, by which it is prevented from flying off, and a consistence resembling that of honey retained. I have had frequent experience of hives not containing a pound of honey, preserved in perfect health through the winter, with sugar so prepared, when given in proper time, and in sufficient quantity.

Covering the hives.—Bees are evidently natives of a warm climate, a high temperature being absolutely necessary to their existence; and their continuiug to live in hollow trees during the severe winters of Russia and America, must depend on the heat produced from the swarms which inhabit these abodes. From my own observation, the hives which are best covered during winter, always prosper most the following summer. I add to the thin covering of straw put on the hives at the time of swarming, a thick coat and shut up the aperture through which the bees entered, so that only one can pass at a time. Indeed as a very small portion of air is necessary for bees in their torpid state, it were better, during severe frosts, to be entirely shut up, as numbers of them are often lost from being enticed to quit the hive by the sunshine of a winter day. It will, however, be proper at times to remove, by a crooked wire or similar instrument, the dead bees and other filth which the living at this season are unable to perform of themselves.

To hives whose stock of honey was sufficient for their maintenance, or those to which a proper quantity of sugar had been given for that purpose, no further attention will be necessary, until the breeding season arives. This in warm situations, generally takes place about the beginning of May, and in cold, about a month after.

Owners of hives are often astonished, that, at this advanced season, when their bees had, for weeks preceding, put on the most promising appearance, after a few days of rain, they become so weak and sickly as to be unable to leave the hive, and continue declining until they at last die.

From paying attention to this subject, I am convinced, that the cause is as follows: The young bees, for a short time previous to their leaving their cells, and some time after, require being fed with the same regularity that young birds are by their parents; and if the store in the hive be exhausted, and the weather such as not to admit of the working bees going abroad to collect food in sufficient quantity for themselves and their brood, the powerful principle of affection for their young compels them to part with what is not enough for their support, at the expense of their own lives.

To prevent such accidents, I make it a rule, that if during, the breeding season, it rain for two successive days, to feed all the bees indiscriminately, as it would be difficult to ascertain those only which require it.

THE SILK WORM.

We have been politely favored, by our esteemed correspondent at New York. with the following interesting article on the cultivation of the Silk Worm. It was written by a gentleman formerly a Silk spinner in London, who visited New England a short time since, for the purpose of ascertaining the practicability of establishing himself in the line of his profession in that section of the country; and who, being fully satisfied on this point, has gone back to London in order to make the necessary preparations for commencing business. [*Ohio Supporter.*

The natural food of the Silk Worm being the leaf of the white mulberry, it will be necessary to notice the mode of its cultivation. Hitherto it has been the method in Connecticut, to sow the seed of the white mulberry, and at the age of two years to transplant the young tree at the distance of 25 or 30 feet, as apple trees are managed. It is supposed to be a better way to sow the seed (about corn planting time) in rows, say three feet asunder, so as that the young shoots may stand about six inches apart in the rows.—The ground will require to be kept perfectly clean, which may be easily done by a one horse plough as with corn. The first year, late in the fall, or very early in the following spring, the shoots may be cut off within three or four inches of the ground, care being taken to leave a sufficient number of buds. The second year the sprouts may be mown off and chopped up like straw, into pieces three or four inches long, to be fed to the Silk Worm. This may be done *once* a year, and as the roots will generally shoot out after they have been cut; these stalks may be trimmed off every fall, or spring, before they begin to bud. The roots are said to last, when managed in this way, for 8 or 10 years. To plant an acre will take a quart of seed, and produce leaves to raise 16 or 17 pounds of silk Cultivated in this manner, the mulberry requires a rich land; and for the first two winters, at least, the rows ought to be covered with straw, to protect the shoots from the frost. When the young trees are set out in the common way, high, poor land is generally chosen, as the trees will not leaf out so soon in the spring, as on richer ground, and are consequently less liable to be injured by the late frost. Any person disposed to enter into the business, would do well to set out a few hundred trees in the common way, and also to plant a few across in rows, to have recourse to, while his trees were attaining their growth. Gathering the leaves once in the year, will not hurt the trees, (the leading sprouts being left,) oftner is injurious.

The eggs of the Silk Worm should be kept, especially as spring advances, in a cold cellar When the mulberry begins to leaf out, any number of the eggs may be brought up, and about 10 or 12 days after they have been exposed to the air, unless the weather be cold, they will produce the young worms. When, by mischance, the eggs are hatched before the leaves come out, the worms may be fed with young lettuce. There need not be more worms feeding at one time, than can be conveniently attended to; and by bringing up

another set of eggs from the cellar 10 or 12 days before the first worms begin to wind, or make their silk, a great number can be kept during the summer with little trouble. They ought to be placed on the shelves (protected from the wind and weather) and which, on accouut of the greater security from insects, ought to be supported by a frame unconnected from the walls or ceiling of the building. The shelves may be two or three feet wide, and two or three in one frame; the first say, one foot from the floor; the second one, a half above that; and so, for the third, if the height be not inconvenient. Great care must te taken to keep insects, especially the *red ant*, from the shelves, as they will destroy great numbers of the egg worms in a short time. It is said if the legs of the frames be chalked round for an inch or two from the ground, the ants will not be able to climb up. If the legs of the frame were set in small troughs of water, it is a more effectual preventive. A mixture of molasses and peal ash, put in places where the worms are exposed, has also been found useful.

The worms will require to be fed three and some times four times a day; and mulberry leaves are to be sprinkled lightly over them; attention being paid to have the young worms fed with the youngest and most tender leaves. When the leaves are wet with dew or rain, they must be spread out on a cloth, or very clean floor, and dried before they are given to the worms. The shelves require to be occasionally cleaned, especially if the weather be damp—This is easily done after the worms have been fed, when they are on the fresh leaves, by removing the leaves with the worms on them to a clean shelf; when the first shelf may be cleaned for the reception of the worms from the next.—If the worms seem sickly, it may be well to sprinkle them with vinegar, or rub the shelves with tansey or wormwood, so as to leave the scent on them. The buildings where the worms are kept, should allow a free circulation of air, and on this account, there ought not to be more than one, or, at most, two ranges of shelves in breadth, in the same building. In about four weeks, the worms begin to wind, and in this time they change their skin three or four times. At these periods they have been observed to eat nothing, and should not be disturbed.

Before they are placed on the shelves, let a cleet or narrow piece of wood be nailed across each of the shelves, say one foot from the end, and about one and a half inches, another, parallel to the first, so as to form a slide, and let these slides be repeated at the distance of about two feet along all the shelves.—Then let pieces of board be sawn out, long enough to reach across the shelves, and of such width as to slide easily between the cleets.—These pieces may be bored full of holes, perpendicularly, to receive small branches for the worms to wind among. For these branches chesnut is preferred, and those ought to be chosen on which there are most leaves.

The branches when fixed on the sliders, should reach across the shelves, and in height, to the next shelf above. Of these sliders a double set should be provided; and when the silk worms begin to wind, place a slider with the boughs, fixed in it, in each of the slides. Let them remain about three days, when they may be re-

moved (their places being filled with the other set) with what worms on them, to any safe and secure place, there to remain three days more, when all the worms on them will have finished their *cocoons*, or little balls of silk; as this operation takes them about three days. As the silk worm in 14 days from its beginning to wind will eat out of the cocoon, all this set of cocoons must be reeled off, or baked, within seven or eight days more; that is within ten or eleven days from the sliders being taken from the shelves; for on the eleventh those worms which began to wind *first*, will cut out and spoil their work. By managing the worms in this way, every set may be kept separate, but if this method, or some other for the same purpose, be not attended to, it will be impossible to distinguish those cocoons which the worms are beginning to eat through, from those in an unfinished state.

When a great number of worms are kept, it will generally be necessary to bake them. For this purpose the cocoons are to be put into an oven, made pretty warm, but not so hot as to *scorch* when tried with a sprinkling of flour.—A few trials will ascertain the proper degree of heat. If the oven be not warm enough; instead of killing the chrysalis, it will only bring it forward the sooner. The cocoons must be placed so thinly as to give the heated air free access to each. One half hour will generally be sufficient to kill the chrysalis, and when the cocoons are taken out, they must be scattered so as to allow them to cool, and the moisture thoroughly to evaporate. Indeed they ought never to be laid in large heaps, as they will be liable to mould. When the business is carried on to any extent, it would be well to provide a number of wicker baskets, say six inches square, and as high as the oven will admit, in which the cocoons might be baked, and where they might be kept afterwards. Of course a sufficient number of cocoons must be reserved, unbaked, for stock.—For fifty pounds of silk, perhaps half a peck might not be too many, which must be put by themselves. About 14 days from the worms beginning to wind, they will eat out of their cocoons in the shape of moths. In this state they require no food. The reserved cocoons had better be placed on paper, where the moths will deposit their eggs, and the paper can then be folded up, and put in a box, or other secure place until the next spring.

After all the cocoons but those reserved, are baked, will come the most difficult part of the business, viz: that of reeling the silk from the cocoons. Having taken off the outside *tow*, a small quantity, perhaps a quart, may be put in a kettle of warm water: the kettle must be suspended over a small fire, so as to keep the water at the right heat. The required degree of heat is greater for some cocoons than for others; the water ought never to boil, as the ebulition would entangle the silk; and if it is not sufficiently warm to dissolve the gum, the silk will not run off the cocoons. If the cocoons be gently stirred round with a small brush (of the broom corn will do) the ends of some of them will adhere to the brush, and may be drawn up. Enough should be taken up to make a thread one fourth or one sixth the size of sewing silk. These ends must be gathered into one and made fast to a common reel; and the silk can

then be reeled off as any other article. The pressing of the thread of silk between the thumb and finger, as it goes on the reel, will stick the several threads together, so as to form one.

When by the breaking or running off, of some of the cocoons, the thread becomes too small, the brush must again be resorted to, and a few more ends taken up and added to it. The brush must accordingly be put down to the bottom of the kettle, as some of the cocoons after a time sink, and if suffered to remain long in the water will become soft and good for nothing. The great difficulty in this operation, is in keeping the thread of silk nearly the same size: and unless this is done, the silk will be comparatively *worthless*. On account of the quantity of gum contained in the silk, and its being partially dissolved by the hot water, if the thread goes directly on the reel, the skein is apt to stick together, so as to render the winding again from the skein a very difficult operation. To remedy this, the thread had better be passed over a pulley or bobbin in the ceiling of the room, and from that over another in the wall, at a convenient height, before it goes on to the reel, that it may have time to dry before it touches the skein on the reel.

Silk carefully reeled in this way will fetch about $4 50 per lb. This price was given for raw silk last year in Connecticut. Any farmer, especially if he has a family, (who now perhaps finds it difficult to raise even the money for his taxes) by paying a little attentiod to the above directions, and taking the pains to raise a few hundred trees, may grow from 20 to 50 pounds of Silk every year, and this, without interfering with the business of the farm, as evey part of the process may be attended to by women and children. The inhabitants of some parts of Connecticut, have, for many years, made the raising of *silk* an object of their serious attention In the vicinity of Mansfield and Hampton, upwards of two thousand pounds have been grown in the year; and so perfectly are the inhabitants convinced of the advantages of this branch of business, that they are rapidly extending their Mulberry plantations in every direction. There is every reason to believe that the climate of the Western States is as suitable to the White Mulberry, as the State of Connecticut, and if the inhabitants of this state find their advantage in raising silk, every inducement must exist with those of Ohio, or of any other of the Western States, to follow their example

VALLEY OF THE MISSISSIPPI.

The valley of the Mississippi and its tributary rivers exceeds, in extent of surface the limits of any other country whose waters are accumulated, and flow through the channel of one river to the ocean. —The United States are separated, from north to south, into nearly equal eastern and western divisions, by the river Mississippi, the valley of which, is therefore, situated in the central part of the American republic. It extends east to the Allegheny mountains, which divide the Union into the Atlantic and western states, and west to the Rocky Mountains, which separate the territories and states west of the Mississippi river, from the country bordering on

the shores of the Pacific, and passing through nineteen degrees north latitude and thirty two degrees of longitude, embracing an area of more than one million of square miles. The rivers which bountifully intersect this extensive region, uniting their waters with the Mississippi, are every where numerous and of unparalleled length. Those which fall into the Mississippi on the west, are—the Arkansas 2000 miles long, which is navigable 1000 miles—Missouri, 4,400 miles in length, and navigable 2,600 miles—Red River navigable 500 miles—Des Moins 800, and St. Peter's 200; those emptying their waters on the eastern margin of the river, are the Yazoo, navigable 100 miles; the Ohio, 845 miles long, and navigable the whole length; the Illinois navigable 200 miles, and Ouisconsin, 350 miles long, and navigable 180 miles. Almost every staple production of commerce, such as the sugar cane of India, the rice of Ethiopia, the spices of Malacca, the grape of France, the cotton of the South Sea Islands; are the natural growth of its rich and fertilizing soil. In addition to the productiveness of soil, minerals and metals of the most general use, and of the highest value, are found in great and rich varieties. Within its confines since the American revolution, settlements have been effected, states and territories have been organized, cities vieing in opulence with those which centuries have contributed to establish, have, in the space of twenty years, been built, where nothing but wilderness then surrounded their cites. New Orleans, the sixth city in size in the United States, contains near 40,000 inhabitants; Cincinatti, in 1805, had a population of only 500, but in 1820, it contained 9,600; Lexington, in Kentucky, enumerated at the late census, a population of 5,300; Nashville (Tenn.) 3000; and St. Louis, (Md.) 4,200. The whole population of this territory west of the Allegheny mountains, exclusive of the Indians, fell short of 2,300,000, which was a fraction more than two individuals to each square mile, as the valley of the Mississippi embraces 1,000,000 square miles, or one half of the land within the jurisdiction of the American states. When the population of this almost unlimited region amounts to 34,000,000, it will be just equal to the amount of inhabitants which the state of New York, had on each square mile at the last census.

VOLCANIC LAKE.

The 51st number of the North American Review contains an interesting review of a book recently published in Boston, entitled "Journal of a tour around Hawii, the largest of the Sandwich Islands," from which we extract the following extraordinary description.

Among the most extraordinary phenomena on the island of Hawii, is the great crater of Kirauea, situate about twenty miles from the sea shore in the interior. It is thus described in the Journal.

"Immediately before us yawned an immense gulph, in the form of a cressant, upwards of two miles in length, and about a mile across, and apparently eight hundred feet deep. The bottom was filled with lava, and the southwest and northern parts of it were one

vast flood of liquid fire, in a state of terrific ebullition, rolling to and fro its "fiery surge" and flaming billows. Fifty one craters, of varied form and size, rose like so many conical islands, from the surface of the burning lake. Twenty two constantly emitted colums of gray smoke, or pyramids of brilliant flame, and many of them, at the same time, vomited from their ignited mouths, streams of florid lava, which rolled in blazing torrents, down their black indented sides, into a boiling mass below.

"The sides of the gulph before us were perpendicular for about four hundred feet: when there was a wide horizontal ledge of solid black lava, of irregular breadth, but extending completely round. Beneath this black ledge, the sides sloped towards the centre, which was as nearly as we could judge, three or four hundred feet lower. It was evident, that the crater had been recently filled with liquid lava up to its black ledge, and had by some subteranean canal, emptied itself into one sea, or inundated the low land on the shore. — The gray, and in some places appa ently calcined sides of the greater crater before us; the fissures which intersected the surface of the plain, on which we were standing; the long banks of sulphur, on the opposite side; the numerous columns of vaper and smoke, that rose at the north end of the plain, together with the ridge of steep rocks, by which it was surrounded, rising probably in some places, four hundrdd feet in perpendicular height, presented an immense volcanic panorama, the effect of which was greatly augmented by the constant roaring of the vast furnaces below.

"Between nine and ten, the dark clouds and heavy fog, that since the setting of the sun, had hung over the volcano, gradually cleared away, and the fires of Kirauea, darting their fierce light athwart the midnight gloom, unfolded a sight terrible and sublime beyond all we had yet seen.

"The agitated mass of liquid lava like a flood of melted metal, raged with tumultuous whirl. The lively flame that danced over its undulating surface, tinged with sulphureous blue, or glowing with mineral red, cast a broad glare of dazzling light on the indented sides of the insulated craters, whose bellowing mouths, amidst rising flames and eddying streams of fire, shot up, at frequent intervals, with loud detonations, spherical masses of fusing lava, or bright ignited stones.

"The dark, bold outline of the perpendicular and jutting rocks around, formed a striking contrast with the luminous lake below, whose vivid rays thrown on the rugged promontories, and reflected by the overhanging clouds, combined to complete the awful grandeur of the imposing scene."

It is a striking feature of the volcano, that it does not spring out of a mountain or hill, as is the case we believe in all other parts of the world, but it is seated in a comparatively plain country, at the base of the stupendous mountain, Mounu Roa. It never overflows its margin, like other volcanoes, but the lava seeks a subteraneous passage, bursting out occasionally at a distance from the crater; and finding its way to the lower country, and even to the sea. The dimensions of this enormous gulph have been more accurately ascer-

tained by Mr. Goodrich and Mr. Chamberlain, who have made a revisit to it. By actual measurement they found the upper edge of the crater to be seven and a half miles in circumference : and at the depth of five hundred feet, that its circumferance was at least five and a half miles. They judged the depth to be one thousand feet.

THE FARMER.

From a sermon delivered at Windsor, Vt. December, 1825.

It has long seemed to me, that there is one evil among us, which can be remedied by no laws, as it depends upon the free choice of every individual ; an evil therefore, which must be left to work its own cure ; and that is, that, in proportion to our population, too many leave the employment of the agriculturalist, for other employments. If this arises from its being considered that the employment of the husbandman is not respectable, it is a very great mistake. Every thing is honorable which is useful and virtuous. This is an employment instituted by God himself, and by him peculiarly owned and blest. It is that on which every thing else depends. What can be more pleasing than to diret the young and tender plant how to shoot, and to cherish its growth? What more humane than the care of those animals which contribute to the comfort and convenience of man? True, this employment is laborious ; but then labour brings health, and health is the foundation of enjoyment and happiness. The condition of the farmer is a condition of independence. His little domain is his own, and he is not at the mercy of public whim and caprice. It is not necessarily the case, in this happy country especially, that the farmer must be a stupid, ignorant man. He is taught in his youth the first rudiments of education, and he has many spare hours to read. In the heat of a sultry summer's noon, by the long winter's fire, he has much time for his books, and in this country they are placed within the reach of all. In every neighborhood of farmers, there should be a library, well selected for their use, containing geography, travels and history, that they may know something more of the world, its history and manners, than just of the little spot they themselves occupy. They should spend much of their leisure time in perusing such useful books, that they may be the dupes, neither of political quackery, nor religious imposture, and that they may be able faithfully to discharge the duties of free citizens. Indeed a well informed yeomanry is the stamina of society. Other classes of men are the marble that adorns, but they are the massy granite that forms the strength and stability of the edifice. On the whole, from all my observations of mankind and society, I do not think, that in any pursuit whatever, a young man has a greater chance for a happy life than that of the husbandman. Many a man, after spending fruitless years in speculations, and in the precarious subsistence of an over stocked profession, has sincerely regretted the ill fated day that he left his father's domicil, where there was land enough and to spare, and plunged into more uncertain pursuits.

INVOCATION TO RAIN.

FROM THE GERMAN.

Descend, descend, O shower!
Thy liquid treasures o'er the meadows pour,
And raise each drooping flower.

Yon trees that late, in blooming pride,
Adorned the lovely valley's side,
Thy moistening aid implore;
Yon bower, round which the woodbine gay
Its foliage twines in graceful play,
Dejected droops, and seems to say,
Descend, descend, O shower!

Oh let then not the woodbine fade,
But quickly grant thy fostering aid,
And thy reviving power;
To every plant thy care extend,
And haste, in plenteous streams descend,
Oh balmy shower!

Yon herds that deck the mountain's brow,
And those that range the plain below,
Alike thy aid implore;
Enfeebled by the noontide ray,
O'er hill and dale they drooping stray,
And heaven ward turn the languid eye,
That asks for thee, O shower!

Oh let not nature plead in vain,
Let not the flower that decks the plain
In vain thy aid implore;
But haste thy pearly treasures bring,
Relieve the herds, restore the spring,
O'er earth her emerald mantle fling,
And soft descend, O shower!

While Health, by smiling plenty crown'd,
Shall scatter all her roses round,
And hail thy genial power.